



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
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BOSTON, MASSACHUSETTS 02114-2023

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NAVSTA NEWPORT RI
5090 3a

May 21, 2007

James Colter, P.E.
Remedial Project Manager (Code OPNEEV)
Facilities Engineering Command, Mid-Atlantic
Naval Facilities Engineering Command
9742 Maryland Avenue
Norfolk, VA 23511-3095

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Re: Stone revetment Replacement Design (30% Submission) for the Old Fire Fighting Training Area

Dear Mr. Colter:

EPA reviewed the *Stone revetment replacement Design (30% Submission)* for the Old Fire Fighting Training Area, dated April 2007. Detailed comments are provided in Attachment A.

According to the *Coasters Harbor Eelgrass Survey Summary of Findings*, dated August 10, 2001, the location of the eelgrass beds are accurate to within 15 feet. The Navy needs to account for this level of accuracy in the location of the eelgrass beds when planning the location of the revetment. Since the 30% design allows a 20 foot buffer between the toe of the revetment and the edge of the eelgrass beds, it is possible based on the level of accuracy that only a five-foot buffer may actually exist between the toe of the revetment and the edge of the eelgrass. Furthermore, the referenced eelgrass survey is now six years old and the edge of the eelgrass beds may have changed. Please plan to accurately check the present location of the eelgrass beds before moving forward with the revetment design.

I look forward to working with you and the Rhode Island Department of Environmental Management toward the cleanup of the Old Fire Fighting Training Area. Please do not hesitate to contact me at (617) 918-1385 should you have any questions or wish to arrange a meeting.

Sincerely,

Kymberlee Keckler, Remedial Project Manager
Federal Facilities Superfund Section

Attachment

cc: Paul Kulpa, RIDEM, Providence, RI
Cornelia Mueller, NETC, Newport, RI

Yoon-Jean Choi, USEPA, Boston, MA
Jennifer Stump, Gannet Fleming, Harrisburg, PA
Ken Finkelstein, NOAA, Boston, MA
Steven Parker, Tetra Tech-NUS, Wilmington, MA

ATTACHMENT A

<u>Page</u>	<u>Comment</u>
p. 2-6, §2.3.	Please augment the text to note that a Category 2 action is subject to time of year restrictions determined on a case by case basis.
p. 2-7, §2.3.1.	Please add the following general condition (General Condition #22 in GP-57): “The permittee shall make every reasonable effort to execute the construction or operation of the work authorized herein in a manner so as to maintain as much as is practicable, and to minimize any adverse impacts on, existing fish and wildlife and natural environmental values and to discourage the establishment or spread of plant species identified as non-native invasive species by any federal or state agency.”
p. 3-2, §3.2.1.	Regarding the discussion under “Design Storm and Wave Energy,” in the next submittal please provide backup calculations for the design wave height that is ultimately used for the design.
p. 3-3, §3.2.1.	Regarding the discussion under “Shoreline Stabilization Structure and Slope, Design Storm and Wave Energy”: Additional consideration needs to be given to the space requirements for the portable dams when sizing the buffer area to the eelgrass. Protection of the eelgrass is a primary concern for this project. It appears that the space requirements for the portable dams could consume the entire 20-foot buffer area and will not afford sufficient protection to the eelgrass beds. Please provide EPA with additional information regarding the extent of the excavations and the location of the portable dams and the sediment curtains relative to the eelgrass beds before the design proceeds further (the eelgrass survey is accurate to within 15 feet). This information is required to avoid a significant difference of opinion regarding the adequacy of the protection afforded to the eelgrass beds before the Navy completes a 90% design.
p. 3-3, §3.2.2.	Please describe in detail the procedures that will be implemented (<i>i.e.</i> , field screening, visual and olfactory indications) to identify areas along the excavated shoreline that potentially have residual contamination in excess of the cleanup goals and might need to be excavated beyond that required for construction of the revetment. This is considered a possibility based on the high levels of contamination detected in the vicinity of the shoreline. Under the Excavation requirements, the proposed slopes to establish the shoreline stabilization structure range from 20 to 33 percent. However, Item 4 in Table 2.1 (Policies and Standards) indicates that Fill slopes shall have a maximum grade of “30 percent.” Please clarify which slope is appropriate, 30% or 33%.

- p. 3-6, §3.2.6. The text states that the portable dam (or equal) will be placed within the limits of the excavation. However, it appears that it will have to be placed around the perimeter of the excavation, allowing sufficient distance from the excavation edge to avoid collapsing the excavation. Please edit the text as appropriate for the subsequent submittal.

Additional details will also be required for the next submittal to describe how the revetment for a new section will be constructed to intersect an already-completed revetment section and how the portable dams will be constructed to intersect with the completed revetment section.

- p. 3-7, §3.3. Please also describe what pre-construction and post-construction surveying will be performed specific to the construction of the revetment.

Attachment A

Drawing C-3:

- a) The title of each elevation scale associated with each cross section is "Elevation (feet above mean sea level)". This is not correct; the measurement provided is actually feet above mean low water. Please correct the scale titles.
- b) The areas of each cross section where wetland restoration is proposed is not clearly shown because the bankrun sand and gravel hatching has been overwritten with the stone revetment hatching. Please clarify these cross sections in future submittals by providing larger drawings of each cross section and correcting the hatching for the different areas.
- c) The top cross section on the page is labeled "Section B – B'" but should be labeled "Section A – A."
- d) Regarding Section A - A', EPA is concerned that the grading design at the top of the bank will not allow seawater that overtops the bank to drain back into the sea. The consequence could be that the residual seawater will impair the growth of or kill the grass along the top of the bank that could result in erosion of the soil and undermining of the top of the revetment. Please review the design of the revetment and adjust as appropriate to prevent this from happening.
- e) Section C – C' contains a drawing note indicating "Final Grade" that is not included on the other cross sections. Because the final proposed revetment grade is actually depicted with two different line styles (dashed and solid lines), the referenced note is confusing. Please delete the note or otherwise edit the drawing for clarity.
- f) As depicted in Section C – C', the wetland has not been restored to the landward limit of the wetland. Please adjust the location or configuration of the revetment so that the entire wetland can be restored with bankrun sand and gravel.

Attachment B

Additional specifications expected to be required include:

- Large bag filters/tubes (bank-located) for dewatering behind dams (filter cartridges would not be appropriate)
- Portable dams
- Dewatering of excavated sediment

Attachment C On page 3 of 17, it appears that the size of the stones mentioned in the paragraph right above the Notes is incorrect and not consistent with the calculations. Please review the weights of 708 pounds and 425 pounds and correct as appropriate.

On page 6 of 17 in the last paragraph of Step 10, the minimum distance of 5 feet from the eelgrass beds is not nearly great enough and not consistent with the 20-foot buffer mentioned in the text. Please delete the 5-foot requirement.

On page 6 of 17 regarding the toe design, please note that Design III (shown on page 17 of 17) requires that the length of the toe section at the bottom of the toe be equal to twice the depth of the toe, or in this case 8 to 14 feet long based on the proposed depth shown on Drawing C-3 in Attachment A. However, Drawing C-3 indicates this design requirement has not been satisfied. Please correct.

In the next revetment design submittal, please provide the following supporting information:

- a) Calculations related to the selected or calculated wave height.
- b) Slope stability calculations considering the use of geotextile for the range of revetment configurations selected and the updated revetment design.
- c) Bearing capacity calculations for the soil supporting the revetment.
- d) Settlement calculations for the revetment.
- e) Supporting geotechnical data for the calculations.

Drawing C-1 The top cross section B-B' should be "Section A-A'." Correct as appropriate.

p. 3 of 17 Shoreline Stabilization Calculation, Step 4- Select Armor Unit Size: The calculations indicate that the average stone weight at 3H:1V and 5H:1V slopes is 623 lbs and 374 lbs, respectively. It is unclear why the average stone weight must be more than 708 lbs on the 3H:1V and 425 lbs on the 5H:1V slopes.